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09/560,032	04/27/2000	Alexander C. Ranous	10002142	3043

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EXAMINER	
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/560,032
Filing Date: April 27, 2000
Appellant(s): RANOUS, ALEXANDER C.

Steve E. Dicke
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 12/06/2004.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The brief does not contain a statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief. Therefore, it is presumed that there are none. The Board, however, may exercise its discretion to require an explicit statement as to the existence of any related appeals and interferences.

(3) Status of Claims

This appeal involves claims 1-12, 17-18 and 24-25.

Claims 19-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 13-16 and 26-31 are allowed.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

The rejection of claims 1-31 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

6,405,251	Bullard et al	6-2002
5,970,490	Morgenstern	10-1999

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-12, 17 and 24-25 are rejected under 35 U.S.C. 103(a). This rejection is set forth in a prior Office Action, mailed on 12/06/2004.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-12, 17-18 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,405,251 by Bullard et al in view of US patent No. 5,970,490 by Morgenstern.

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

In claim 1, Bullard teaches about a method for recording network usage, the method comprising the steps of (Col 1, lines 15-30):

defining a network data collector including an encapsulator " NAR processing (Fig 14, 306, 302)", an aggregator, and a data storage system "Local store , (Fig 14, 314)", (Col 15, lines 45-65), (Col 16, lines 1-10);

receiving a set of network accounting data via the encapsulator (Col 15, lines 45-65);

converting the network accounting data set to a standard data format "NAR format" (Col 15, lines 45-65);

storing the aggregated network accounting data set in the data storage system "Local store , (Fig 14, 314)", (Col 16, lines 1-10); and

but does not explicitly teach processing the network accounting data set via the aggregator, including the steps of defining a rule chain and applying the rule chain to the

network accounting data set to construct an aggregation tree including creating an aggregated network accounting data set.

The method of using a rule chain approach in the aggregation of heterogeneous database is well known in the art and is taught by Morgenstern (Fig. 4), (Col 20, line 45-Col 22, line 67). Morgenstern teaches about generating new data base node by match (Col 17, line 65-Col 18, line 10) or filtering (Col 32, lines 50-65) a sequence of outputs. The process of gathering data occurs over a time period, which requires correlation of different data that occur at different time during the collection period. It is inherent because of the diverse nature of the information collected that different rule will be apply at different stages of the collection period as demonstrated by Morgenstern (Fig 4, 224) (Fig 4, 220),(Col 20, line 45-Col 22, line 67). It would have been obvious at the time of the invention for someone of ordinary skill to use a chain rule approach to aggregate data that are stored in a tree like structure to insure the accuracy of the final output data.

In database like accounting record, data are organized base on their dependency to other data. This organization is naturally realized as a tree structure as disclosed by Morgenstern (Fig. 4), (Col 20, lines 45-55). This concept is often used in data base management, which contains a root directory (main node), which is subdivided into subdirectory (limb node or leaf node). By organizing the data in a tree structure the dependency and the correlation of data is clearly represented which make the process of applying rules more define and accurate. By using a chain rule approach, it was guarantee that the final output had gone through the correct sequence of output generation base on its dependency to give the most accurate result (Col 22, lines 20-65).

Because of dependency, the final output has to be placed on hold until all the sequence of events that are used to generate the final output is available.

In claim 2, Bullard combines with Morgenstern teaches about a method of claim 1, wherein the step of applying the rule chain to the network accounting data set to construct the aggregation tree includes the step of applying a rule from the rule chain to the network accounting data set to define a group node (Morgenstern (Col 20, lines 45-55), Covered in claim 1).

In claim 3, Bullard combines with Morgenstern teaches about a method of claim 2, wherein the rule is a match rule (Col 17, lines 35-40).

In claim 4, Bullard combines with Morgenstern teaches about a method of claim 1, wherein the step of applying the rule chain to the network accounting data set to construct the aggregation tree includes the step of applying a set of match rules to the network accounting data set to define a hierarchy of group nodes within the aggregation tree (Covered in claim 1).

In claim 5, Bullard combines with Morgenstern teaches about a method of claim 4, wherein the step of applying the rule chain to the network accounting data set to construct the aggregation tree includes the step of applying an aggregation rule to the match group node to create the aggregated network accounting data set (Covered in claim 1).

In claim 6, Bullard combines with Morgenstern teaches about a method of claim 1, wherein the step of applying the rule chain to the network accounting data set to construct the aggregation tree includes the step of applying a data manipulation rule "constructing NAR as appropriate" to the network accounting data set (Col 15, lines 60-65).

In claim 7, Bullard combines with Morgenstern teaches about a method of claim 6, further comprising the step of defining the data manipulation rule to be an adornment rule " enhancement" (Col 15, line 45-Col 16, line 15).

In claim 8, Bullard combines with Morgenstern teaches about a method of claim 6, further comprising the step of defining the data manipulation rule to be a filtering rule (Covered in claim 1).

In claim 9, Bullard combines with Morgenstern teaches about a method of claim 1, wherein the network accounting data set is a set of session data (Col 8, lines 15-38), (Table 1).

In claim 10, Bullard combines with Morgenstern teaches about a method of claim 1, wherein the network accounting data set is a set of usage data (Col 8, lines 15-38), (Table 1).

In claim 11, Bullard teaches about a method of claim 1, further comprising the step of defining a data flush interval " associated with that entity over a specified period of time" (Col 14, lines 45-50); and

wherein the step of storing the aggregated network accounting data set includes the step of transferring the aggregated network accounting data to the data storage system after a period of time associated with the data flush interval (Col 16, lines 1-10).

In claim 12, Bullard combines with Morgenstern teaches about a method of claim 1, further comprising the step of defining a rule within the rule chain by Java object class "relational database" , and allows additional rule types to be added to the rule chain corresponding to the Java object class (Morgenstern (Col 40, lines 45-60).

In claim 17, Bullard combines with Morgenstern teaches about a method for recording network usage comprising the steps of (Fig 1):

defining a first network data collector including a first encapsulator " NAR processing (Fig 14, 306, 302)", a first aggregator, and a first data storage system "Local store , (Fig 14, 314)" (Col 15, line 45-Col 16, line 15);

receiving a first set of network data via the first encapsulator (Col 15, line 45-Col 16, line 15);

processing the first network data set via the first aggregator, including the steps of defining an aggregation rule chain and determining a first set of aggregated data by applying the aggregation rule chain to the first set of network data (Covered in claim 1); and

storing the first aggregated network data set in the first data storage system (Col 15, line 45-Col 16, line 15).

In claim 18, Bullard combines with Morgenstern teaches about a method of claim of claim 17, wherein the step of applying the aggregation rule chain to the first set of network data further comprises the steps of:

constructing an aggregation tree (Covered in claim 1); and

determining the first aggregated network data set from the aggregation tree (Covered in claim 1).

In claim 24, Bullard teaches about a network usage recording system having a network data collector, the network data collector comprising (Col 15, lines 45-67):

an encapsulator for receiving a set of network accounting data and converting the network accounting data set to a standard data format " NAR processing (Fig 14, 306, 302)", (Col 15, line 45-Col 16, line 15);

an aggregator for processing the network accounting data set, the aggregator including a defined rule chain, wherein the aggregator applies the rule chain to the network accounting data set to construct an aggregation tree, and determines a set of aggregated network accounting data from the aggregation tree (Col 18, line 39-Col 19, line 30), (Covered in claim 1); and

a data storage system for storing the aggregated network accounting data "Local store , (Fig 14, 314)" , (Col 16, lines 1-10).

In claim 25, Bullard combines with Morgenstern teaches about a system of claim 24, wherein the process of applying the rule chain to the network accounting data performs data reduction on the network data (Col 17, lines 30-50), (Col 18, lines 39-67).

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance: Claims 13-16 and 26-31 are allowed. Prior art failed to teach the step of defining a second rule chain and applying it to the network session data to construct an aggregation tree.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Claims 19-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Prior art does not teach the step in the construction of an aggregation tree as disclosed by applicant.

(11) Response to Argument

In response to the argument that "defining a rule chain and applying the rule chain to the network accounting data to construct an aggregation tree creating an aggregated network accounting data" is not teach by the combined references of Bullard and Morgenstern.

In Bullard the nature of the data that is collected is diverse (heterogeneous form) and has to be defined in order to meet a specific user need (Col, 8 line 30 –Col 9, line 55). This is similar to the data disclosed in applicant specification (page 23, line 3- page 24, line 24).

Bullard disclosed an accounting policy 568, which is view as a collection of accounting object 570. To define a user/application, each accounting object is used to create a policy 572a-g (Rules) that determines the data that will be collected by the flow data collectors (Col 22, lines 25-45). The policy (rules) determines the components that will be involved and the data flow to accomplish the task (Col 22, lines 45-60). The data flow is realized in the way components are connected as a result of the construction process (Fig 21). Like the applicant, the rules determine how the aggregation scheme is constructed. The construction process in Fig 21 of Bullard has resulted in an aggregation scheme that take the form of a tree 560 (Col 22, lines 15-25). By creating this tree structure, the path travel from the point that data is collected to the point of data aggregation involves a series of components (Fig 6 572 a-g to 562 a-e to 564 a-b), which create a chain flow. The path travel from source to destination creates the need for rules that incorporate this chain structure. In Morgenstern invention, the nature of the aggregation process like Bullard is best described as a tree structure (Fig 4) (Col 22, lines 20-35). Morgenstern disclosed a set of rules that solved problems of this nature by using a chain of transformation rules as claimed by the applicant (Col 22, lines 34-40).

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

MD
May 11, 2005

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